

WHAT IS CLAIMED IS:

1 1. Process for the combustion of gaseous and/or liquid fuels in lean premix burners,
2 wherein the fuel/air mixture is preheated before ignition.

1 2. Process according to Claim 1, wherein the fuel/air mixture is mixed with an
2 amount of combustion gas before ignition.

1 3. Process according to Claim 2, wherein an amount of combustion gas in a mass
2 fraction of 5% to 60% is admixed to the fuel/air mixture.

1 4. Process according to Claim 2, wherein an amount of combustion gas directly out
2 of the combustion chamber is admixed to the fuel/air mixture.

1 5. Process according to Claim 4, wherein the flowing fuel/air mixture sucks in an
2 amount of combustion gas directly out of the combustion chamber.

1 6. Process according to Claim 5, wherein the fuel/air mixture flows in a swirl flow
2 through a mixing section projecting into a combustion chamber, and sucks in combustion gases
3 from the combustion chamber up-stream of the mouth of this mixing section.

1 7. Process according to Claim 6, wherein the combustion gases are sucked in by
2 means of inlet apertures in the housing jacket of the mixing section.

- 1 8. Process according to Claim 1, wherein it is applied to the operation of lean
- 2 premixed burners of a gas turbine plant.